

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026417**Date Inspected:** 27-Sep-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	John Pagliero and Steve Mc Conn			<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes	No	N/A	<b>Rod Oven in Use:</b>	Yes	No N/A
<b>Electrode to specification:</b>	Yes	No	N/A	<b>Weld Procedures Followed:</b>	Yes	No N/A
<b>Qualified Welders:</b>	Yes	No	N/A	<b>Verified Joint Fit-up:</b>	Yes	No N/A
<b>Approved Drawings:</b>	Yes	No	N/A	<b>Approved WPS:</b>	Yes	No N/A
				<b>Delayed / Cancelled:</b>	Yes	No N/A
<b>Bridge No:</b>	34-0006			<b>Component:</b>	SAS Tower	

**Summary of Items Observed:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At Tower Base Elevation Electro Slag Welding (ESW) T-joint E-044 location 'B', QA randomly ABF welder Rory Hogan perform 3G SMAW first time welding repair (R1) on the Ultrasonic Testing (UT) detected defect on the internal of the vertical weld of the ESW. The welder was observed welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repair Rev. 2. The boat shape repair excavation located at Y=8975mm to Y=9135mm was excavated to dimensions of 160mm long x 40mm wide x 42mm deep. The excavation was previously tested using Magnetic Particle Testing (MT) by ABF QC John Pagliero and this QA with positive result.

The repair excavation and the adjacent base metal was preheated and maintained to more than 204°C (400°F) using Miller Proheat Induction Heating System with the heater blankets placed at the other side of the repair. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 135 amperes on a 1/8" diameter E7018H4R electrode. At the end of the shift, repair welding was completed and the welder has held the 400°F preheat by programming the Miller Proheat 35 Induction Heating System to hold the preheat of 400°F for three hours and cool down at 150°F per hour as recommended by ABF.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the ESW welding of four (4) various locations at 0 to 9 meters elevation. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the

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## WELDING INSPECTION REPORT

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requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

### ESW Location      Remarks

1. N-041 location 'N' (inside/B face) Deemed acceptable.
2. W-041 location 'W' (inside/B face) Deemed acceptable.
3. N-044 location 'A' (B face) Deemed acceptable.
4. W-044 location 'D' (B face) Deemed acceptable.

Other welding related activities noted during the shift include the following;

1. ESW location 'S' (outside) – smooth grinding of the cut and gouged radius of the sump block removal was completed but noted with linear indications. Linear indications still need to be removed. The welder has moved to ESW location 'R' and started smooth grinding the same radius as previously mentioned.
2. ESW locations 'P', 'Q', 'V' & 'T' (outside/80-100 butt joint transition) – four ABF welders were noted grinding/cleaning the ESW weld cover that include removal of strong back remnants. This is in preparation for the QC VT and NDE testing.



### Summary of Conversations:

No significant conversation occurred today.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:**      Lizardo, Joselito

Quality Assurance Inspector

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**Reviewed By:**      Levell, Bill

QA Reviewer